MEMORANDUM

TO: Members, Clark Fork Basin Water Management Task Force
FROM: Gerald Mueller, Project Coordinator
SUBJECT: Summary of the March 1, 2004 Meeting
DATE: March 3, 2004

Participants

The following people participated in the Task Force meeting:

Task Force Members:

Eugene Manley	Granite County
Harvey Hackett	Bitter Root Water Forum
Fred Lurie	Blackfoot Challenge
Jim Dinsmore	Upper Clark Fork River Basin Steering Committee
Steve Fry	Avista Corp
Elna Darrow	Flathead Basin Commission
Phil Tourangeau	Confederated Salish and Kootenai Tribes
Holly Franz	PPL Montana
Gail Patton	Sanders County
Marc M. Spratt	Flathead Conservation District
Verdell Jackson	Legislature

Staff:

Gerald Mueller	Montana Consensus Council (MCC)
Mike McLane	Montana Department of Natural Resources and Conservation (DNRC)

Meeting Goals:

- **$** Discuss drought target methodology
- **$** Discuss hydropower water rights, junior rights and future water development
- **$** Review option ranking
- **$** Agree on options to include as recommendations in the draft management plan
- **$** Report on water worth analysis
- **$** Agree on next steps

Discuss Drought Target Methodology

Mike McLane showed a PowerPoint presentation discussing development of subbasin draft flow targets. A copy of his presentation can be found at ftp://ftp3.state.mt.us/dnrc/mclane . Mr. McLane discussed the targets for the existing drought plans for the Big Hole, Jefferson, and Blackfoot subbasins. In these plans, cut backs occur when trigger flows are reached. The cut backs are based on percentage reductions and are not strictly based on water rights. For the Big Hole and Jefferson subbasins, the flow targets are based on a survival flow, the amount of water that would allow fish to survive and the river to remain connected. These survival flows represent unusually low flow that occur under relatively sever or reoccurring drought conditions. In the third example, the Blackfoot, the flow targets are based on the Murphy water rights held by the Montana Department of Fish, Wildlife and Parks (DFWP). Murphy rights were set at flow levels designed to meet the biological needs of a blue ribbon fishery as opposed to a survival flow. In the Clark Fork River Basin, rivers and streams with Murphy rights include

Rock Creek (upstream of Missoula) and the main stem and the three forks of the Flathead River. DFWP also purchases water from Painted Rocks for an instream flow on the Bitterroot River.

According to Mr. McLane, to set a drought trigger, the drought plan goals and beneficiaries should be defined. In the three example plans the goal was to include local fishery concerns in the drought management effort. Mr. McLane stated that in some heavily appropriated subbasins water commissioners are routinely appointed to oversee water distributions. In these regulated basins the current goal is often an equitable distribution of water, typically by priority, to diversionary uses; therefore, a dry stream might be a well-managed stream. However, in these subbasins, a drought plan that was focused on a discharge flow to downstream hydropower might consist of beginning the commissioner's activities sooner in the year. In this way a greater amount of water might leave the basin headed to the downstream user. Mr. McLane's primary conclusion is that the goal and beneficiary of a drought plan must be defined -- no one-size-fits-all formula will work to set subbasin drought target flows. For example, assume that the drought objective is to minimize drought impacts on downstream users to avoid a water rights call. A local drought trigger might be modeled after the Blackfoot trigger and be based on a relatively common and expected flow condition. Mitigation actions would then occur earlier and more frequently.

Continued Discussion of Hydropower Water Rights, Junior Rights and Future Water Development

Representative Jackson and Steve Fry each presented material to the Task Force addressing flows in the Clark Fork River.

Rep. Jackson

Rep. Jackson presented the results of his analysis of the monthly average flows in the Clark Fork at Plains and at St. Regis and in the Flathead River for three periods: the most recent ten years and two 45-year periods, from 1911-1955 and 1956-2000. He stated that the 45-year average Clark Fork River flow since the Washington Water Power Company (now Avista) built the Noxon Rapids Project, i.e. the 1956-2000 average, is higher than for the preceding 45 years, and that the most recent 10 year average flow at Polson, St. Regis and Plains is higher than the 1956-2000 average. Rep. Jackson concludes that the flow data do not show any evidence that the water supply for Avista's dams is being negatively impacted.

Rep. Jackson also examined the effect of the operation of Hungry Horse Dam on the delivery of water to Avista's Noxon Rapids Project. He stated that use of storage behind Hungry Horse and in Flathead Lake has reduced the amount of water Avista has spilled at Noxon Dam. Prior to construction of Hungry Horse Dam, Rep. Jackson calculated that Avista spilled 1,220,953 acre/feet (ac/ft) per year based on a generation capacity of 50,000 cubic feet per second (ft^3/sec). After Hungry Horse began operating, Rep. Jackson calculated that only 620,527 ac/ft per year of water was spilled because the combination of Hungry Horse and Flathead Lake storage reduced river flows during the normal high runnoff months and redistributed them over the lower flow months. Specifically, depending on how it manages its own Noxon Rapids' storage, Avista should be able to utilize for power production an additional 600,426 ac/ft per year spread over the 8 months of lower flows. During the last ten years, Hungry Horse has operated to reduce peak flows during May and June even more and to redistribute them into August, November and December. Rep. Jackson calculates that this operation further reduces spillage to 517,676 ac/ft per year. Avista can, therefore, utilize 703,277 ac/ft per year more than it could prior to operation of Hungry Horse Dam. Rep. Jackson stated that this amount approaches twice the

amount of water depletion used for irrigation which he calculates to be 400,526 ac/ft per year. Thus Rep. Jackson concludes that no measurable negative impact on Avista's water rights occurs as a result of farm and ranch land irrigation during the summer months or at any other time.

Rep. Jackson also presented information about trends in farm land in the Flathead Valley. He stated that recent reports indicate that the amount of farm ground is decreasing by at least 3% per year, and that at least half of this amount is irrigated ground. The decrease in farmland from subdivision activity in 2003 in the Flathead is expected to be about 3,500 acres.

Task Force Member Comment - Subdivision activity in the Flathead has changed over the past two years resulting in more houses per acre in new rural subdivisions. Lot size is decreasing to 6,000-7,000 square feet. At about 6 houses per acre, domestic water use will equal irrigation water use. As irrigated agriculture disappears, domestic water use is becoming more important. The source of domestic water is ground rather than surface water. Information from the Bureau of Mines' ground water assessments indicates that to date the increased use of ground water has not affected ground water supplies. However, nobody knows the connection between ground water and Flathead River flows.

Task Force Action - The Task Force agreed to request that Marc Spratt prepare a discussion for the management plan chapter on conservation of the replacement of irrigation water use by domestic use and its significance.

Steve Fry

Steve Fry used overheads to present an analysis of daily average Clark Fork River flows at Plains over the 45 years from 1956-2000. His analysis indicated a downward trend which would mean that less water is reaching the turbines at Avista's Noxon Rapids project. He also presented information from a study conducted for the Bonneville Power Administration that appeared to show a reduction in river flows above Kerr Dam. Mr. Fry concluded that depending on how the flow data are analyzed, one might conclude different things about impacts on Avista's water rights, and that river flows in cfs and timing of those flows are important hydropower parameters.

Task Force Member Comment - Regardless of how the flow data is averaged, Avista has a water right that at times is not filled which means that the company would have a right to make a call on junior users.

Comment by Gerald Mueller - It appears that members of the Task Force hold two different views on this subject. One view is that when Avista's water right is not filled, it has the right to make a call on junior users. Also, because Avista's right is not filled, additional water may not be available for new appropriations. The other view is that looking at the flow data, no measurable negative impact on Avista's water rights can be demonstrated. I'm not sure that the Task Force can reconcile these conflicting view points. However, it may be possible to identify specific actions acceptable to the Task Force, Avista and the State of Montana which if taken would allow Avista to agree not to make a call on junior water users and not to attempt to block future water development. The State and Avista did in fact reach such an agreement in the past, but the mechanism for implementing the agreement, Avista's FERC hydropower license, proved not to be available. Perhaps a new agreement might involve State access to a block of water in Hungry Horse Reservoir.

Task Force Agreement - The Task Force agreed to take up this issue at a future meeting when information about possible State management of a block of Hungry Horse water is available.

Option Ranking Review

Gerald Mueller passed out two documents to summarize the ranking by Task Force members of the recommendation options identified to date for possible inclusion in the water management plan. One document summarized the rankings of each participating Task Force member on an anonymous basis, and the other totals the rankings for each recommendation by the four categories, essential, ok, unacceptable, and don't understand. These documents will be supplied through a separate mailing.

Discussion of the Options

In light of the rankings, the Task Force began reviewing the options to decide which to retain for inclusion in the management plan. Time permitted reviewing the only the recommendations in chapters 2 and 7. The revised table summarizing the recommendation options which the Task Force decided to retain is included in Appendix 4 below. The table is entitled, "Summary of Management Plan Recommendation Options."

Report on Water Worth Analysis

Mike McLane stated that he has discussed with Mike Roberts, an economist in his Bureau, an analysis Mr. Roberts has conducted about the value of water. Mr. McLane agreed to ask Mr. Roberts if he would come to the April Task Force meeting to discuss his analysis.

Next Meeting

The next meeting was scheduled for Monday, April 5, 2004 at 9:00 a.m. in the DFWP conference room at 3201 Spurgin Road in Missoula. The agenda will include:

- A presentation by Dr. Larry Swanson with the Center for the Rocky Mountain West regarding the economic and demographic trends in the Clark Fork River Basin;
- Discussion of the possible management by the State of a block of Hungry Horse Reservoir water;
- Continued discussion of a hydropower water rights, junior water rights, and future water development;
- Completion of the discussion of the recommendation options for inclusion in the management plan;
- A presentation by Mike Roberts about the value of water;
- Discussion of the state water plan hearings on the management plan; and
- Next steps.